

What is claimed is:

1 1. A fuel cell bipolarplate for providing a gas flow path
2 while being disposed at both sides of MEA, comprising:
3 a bipolarplate substrate that is of only a
4 corrosion-resisting metallic material or a composite composed
5 of a corrosion-resisting metallic material to define the
6 surface layer of the composite and the other metallic material
7 to define the inner layer of the composite; and
8 a conductive contact layer that is formed on the
9 bipolarplate substrate, the conductive contact layer being of
10 noble metal and having a thickness of 0.0005 μm or greater and
11 less than 0.01 μm .

1 2. A fuel cell bipolarplate for providing a gas flow path
2 while being disposed at both sides of MEA, comprising:
3 a bipolarplate substrate that is of only a
4 corrosion-resisting metallic material or a composite composed
5 of a corrosion-resisting metallic material to define the
6 surface layer of the composite and the other metallic material
7 to define the inner layer of the composite; and
8 a conductive contact layer that is formed on the
9 bipolarplate substrate, the conductive contact layer being of
10 carbon or a composite compound with a bandgap of 0.6 eV or less
11 and having a thickness of 0.0005 μm or greater and less than
12 0.01 μm .

1 3. The fuel cell bipolarplate according to claim 1,
2 wherein:

3 the conductive contact layer is formed through a joining
4 layer on the bipolarplate substrate.

1 4. The fuel cell bipolarplate according to claim 2,
2 wherein:

3 the conductive contact layer is formed through a joining
4 layer on the bipolarplate substrate.

1 5. The fuel cell bipolarplate according to claim 1,
2 wherein:

3 the conductive contact layer is formed only on a rib face
4 to contact a conductive gas diffusion layer of MEA.

1 6. The fuel cell bipolarplate according to claim 2,
2 wherein:

3 the conductive contact layer is formed only on a rib face
4 to contact a conductive gas diffusion layer of MEA.

1 7. The fuel cell bipolarplate according to claim 1,
2 wherein:

3 the corrosion-resisting metallic material is Ti or Ti
4 alloys.

1 8. The fuel cell bipolarplate according to claim 2,
2 wherein:

3 the corrosion-resisting metallic material is Ti or Ti
4 alloys.

1 9. The fuel cell bipolarplate according to claim 7,

2 wherein:

3 the conductive contact layer is of Au, Pt, Ru or Pd.

1 10. The fuel cell bipolarplate according to claim 8,

2 wherein:

3 the conductive contact layer is of any one of carbon, TiN,
4 TiC and TiB or a composite of two or more of carbon, TiN, TiC
5 and TiB.

1 11. The fuel cell bipolarplate according to claim 9,

2 wherein:

3 the conductive contact layer is formed through a joining
4 layer on the bipolarplate substrate, and the joining layer is
5 of Ti, Ni, Ta, Nb or Pt and has a thickness of 0.6 nm or greater
6 and 50 nm or less.

1 12. The fuel cell bipolarplate according to claim 10,

2 wherein:

3 the conductive contact layer is formed through a joining
4 layer on the bipolarplate substrate, and the joining layer is
5 of Ti, Ni, Ta, Nb or Pt and has a thickness of 0.6 nm or greater
6 and 50 nm or less.

1 13. The fuel cell bipolarplate according to claim 9,

2 wherein:

3 the conductive contact layer is formed only on a rib face
4 to contact a conductive gas diffusion layer of MEA, and a groove
5 portion other than the rib face is covered with titanium oxide.

1 14. The fuel cell bipolarplate according to claim 10,
2 wherein:
3 the conductive contact layer is formed only on a rib face
4 to contact a conductive gas diffusion layer of MEA, and a groove
5 portion other than the rib face is covered with titanium oxide.